



CHEMISTRY

BOOKS - TARGET CHEMISTRY (HINGLISH)

p-BLOCK ELEMENTS

Classical Thinking

1. The general valence shell electronic configuration of p -block elements is

A. ns^2np^{1-2}

B. ns^2np^{1-5}

C. ns^2np^{1-4}

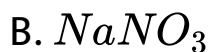
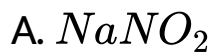
D. ns^2np^{-16}

Answer: D



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2. Indian salt petre is _____.



D. KNO_3

Answer: D



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3. The density of _____ highest among the group
15 elements .

A. phosphorus

B. arsenic

C. antimony

D. bismuth

Answer: D



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4. The $P - P - P$ bond angle in white phosphorous is ____ .

A. 120°

B. 90°

C. 60°

D. $109^\circ 28'$

Answer: C



5. Which of the following statements are not correct about the hydrides of Group 15 elements?

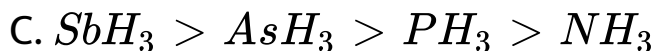
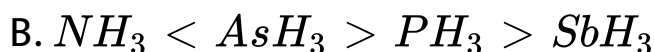
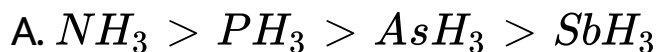
- A. The hydrides of the elements of group 15 are ionic.
- B. The thermal stability of the hydrides decreases down the group.
- C. The basic character of the hydrides decreases down the group.

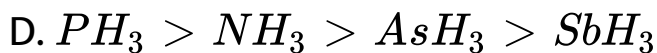
D. The reducing nature of the hydrides increases down the group .

Answer: A

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6. The correct sequence of decrease in the bond angles of the following hydrides is



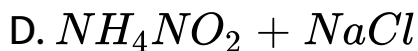
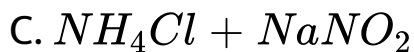
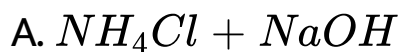


Answer: A



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7. Pure nitrogen is prepared in the laboratory by heating a mixture of



Answer: C



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8. The low reactivity of nitrogen is due to

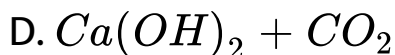
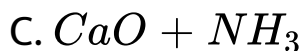
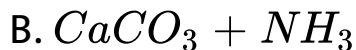
- A. small atomic radius
- B. high electronegativity
- C. stable configuration
- D. high bond dissociation energy

Answer: D



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9. The products obtained on hydrolysis of calcium cyanamide with super heated steam are _____.



Answer: B



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10. In Haber's process for the manufacture of ammonia, the catalyst used is finely divided _____.

A. nickel

B. molybdenum

C. iron

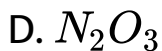
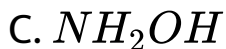
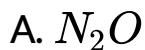
D. platinum

Answer: C



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11. A mixture of ammonia and air at about $800^{\circ}C$ in the presence of *Pt* gauze forms

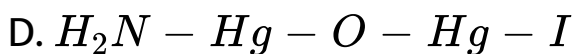
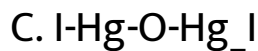
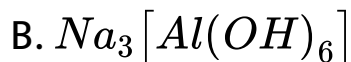
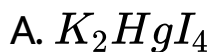


Answer: B



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12. Nessler's reagent is :



Answer: A



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13. Ammonium salts give a brown precipitate with Nessler's reagent due to the formation of _____.

A. iodine of Nessler's base

B. iodine of Millon's base

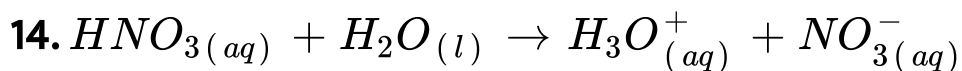
C. ammonium mercuric iodine

D. ammonium iodine

Answer: B



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The above reaction is called as _____.

A. hydrogenation

B. halogenation

C. autoionization

D. deionization

Answer: C



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15. Which of the following oxides of nitrogen combines with Fe(II) ions to form a brown complex ?

A. N_2O

B. NO

C. N_2O_3

D. N_2O_5

Answer: B



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16. Which of the following is INCORRECT for N_2O ?

- A. It is called laughing gas.
- B. It has two resonating structures.
- C. It is a non-linear molecule.
- D. It is diamagnetic

Answer: C



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17. Nitric acid is used in the manufacture of _____.

A. fertilizers

B. sulphuric acid

C. T.N.T

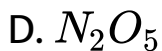
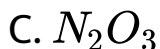
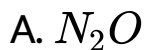
D. all of these

Answer: D



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18. In which of the following oxides N has +5 oxidation state ?



Answer: D



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19. Dinitrogen tetroxide (N_2O_4) has _____.

- A. two unpaired electrons and its paramagnetic
- B. four unpaired electrons and is paramagnetic
- C. one unpaired electron and is paramagnetic
- D. no unpaired electron and is diamagnetic

Answer: D



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20. The element which catches fire in air at $30^{\circ}C$ and is stored under water is _____.

A. calcium

B. sodium

C. white phosphorus

D. zinc

Answer: C



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21. Of the different allptropes of phosphorus the one which is most reactive is _____ phosphorus.

A. red

B. α -black

C. white

D. β black

Answer: C



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22. White phosphorus may be removed from red phosphorus by

A. sublimation

B. dissolving in CS_2

C. distillation

D. heating with HCl solution

Answer: B



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23. Red phosphorus is prepared by carefully heating yellow phosphorus . A catalyst used in the reaction is _____.

A. oxygen

B. nitrogen

C. iodine

D. carbon

Answer: C



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24. Why is red phosphorus less reactive than white phosphorus ?

A. highly polymerised structure

B. higher ignition point

C. higher density

D. insolubility in carbon disulphide

Answer: A



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25. Mixture used in Holme's signal is

- A. CaC_2 and $CaCl_2$ in water
- B. $CaCl_2$ and Ca_3P_2 in water
- C. CaC_2 and Ca_3N_2 in water
- D. CaC_2 and Ca_3P_2 in water

Answer: D



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26. When white phosphorus (P_4) is treated with thionyl chloride, the products obtained are _____.

- A. PCl_3 and PCl_5
- B. PCl_3 and $POCl_3$
- C. PCl_3 , S_2Cl_2 and SO_2
- D. PCl_3 , PCl_5 and S_2Cl_2

Answer: C



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27. Hydrolysis of phosphorus pentachloride results in the formation of _____.

- A. phosphorus acid
- B. pyrophosphoric acid
- C. hypophosphoric acid
- D. orthophosphoric acid

Answer: D



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28. Phosphorous has the oxidation state of +3 in :

- A. orthophosphorus acid
- B. hypophosphoric acid
- C. orthophosphoric acid
- D. polymetaphosphoric acid

Answer: A



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29. Which one of the following pairs is not correctly matched ?

A. 

B. 

C. 

D. 

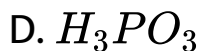
Answer: D



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30. Which one of the following is pyrophosphoric acid ?

A. H_3PO_4



Answer: B



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31. Which of the following oxyacids of phosphorus is a reducing agent and monobasic?



C. 

D. 

Answer: B



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32. Group 16 element (except polonium) are called chalcogens because

A. these elements , particularly sulphur and oxygen are present in many metallic ores, manily as oxides and sulphides.

B. a large number of acids contain these elements, particularly sulphur and oxygen .

C. these elements manily form anoins.

D. these elements exist in different allotropic forms.

Answer: A



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33. _____ occurs in nature as a decay product of thorium and uranium minerals .

A. Bismuth

B. Polonium

C. Lead

D. Radon

Answer: B



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34. The first ionization energies of the lighter elements of group 16 are _____ those of group 15 elements.

A. as same as

B. greater than

C. lower than

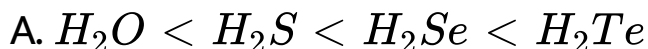
D. twice as

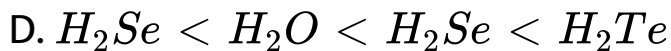
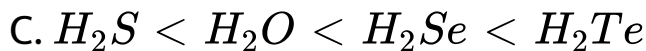
Answer: C



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35. The increasing thermal stability of the hydrides of group 16 follows sequence _____.





Answer: B



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36. Which would quickly absorb oxygen?

A. Alkaline solution of pyrogallol

B. Concentrated H_2SO_4

C. Lime water

D. Alkaline solution of $CuSO_4$

Answer: A



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37. Which of the following gases present in air to protects life on the earth from the harmful effects of ultraviolet from the sun ?

A. oxygen

B. nitrogen

C. Ozone

D. Sulphur

Answer: C



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38. Ozone is obtained from oxygen

A. the action of electric discharge

B. oxidation at higher temperature

C. oxidation in the presence of catalyst

D. oxidation at low temperature and pressure

Answer: A



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39. Ozone is a _____.

- A. deep red liquid
- B. dehydrating agent
- C. sweet smelling gas
- D. strong oxidising agent

Answer: D



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40. Which of the following is INCORRECT ?

- A. O_2 is weaker oxidant than O_3
- B. O_2 has small bond length than O_3
- C. Both O_2 and O_3 are paramagnetic
- D. O_2 is linear and O_3 is angular in shape.

Answer: C



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41. Which of the following statements about sulphur is INCORRECT ?

- A. Sulphur exists as octaatomic S_8 molecule with puckered ring structure.
- B. In S_8 molecule, each atom undergoes sp_3 hybridization involving both bonding and non-bonding pairs of electrons.
- C. There are two single covalent bonds and two lone pairs of electrons associated with each S atom and S_8 molecule.
- D. The S-S-S bond angle in S_8 molecule is 90° .

Answer: D



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42. Copper turnings when heated with concentrated sulphuric acid will give



Answer: A



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43. SO_2 gas may be produced by _____.

A. burning S in absence of air

B. roasting ZnS

C. heating $Fe_2(SO_4)_3$

D. hydrolyzing Na_2SO_4

Answer: B



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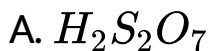
44. SO_2 in moist condition behaves as _____.

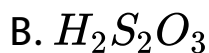
- A. oxidising
- B. reducing
- C. bleaching
- D. both (B) and (C)

Answer: D

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45. Which of the following is called as sulphuric anhydride ?



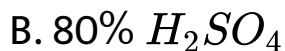
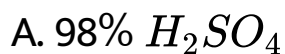


Answer: D



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46. Which of the following is called for the absorption of SO_3 is _____.



C. 20% oleum

D. 90% H_2SO_4

Answer: A



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47. Which one of gas dissolves in H_2SO_4 to give oleum?

A. SO_2

B. H_2S

C. S

D. SO_3

Answer: D



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48. The catalyst used in the manufacture of sulphuric acid by contact process is `:

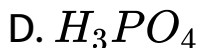
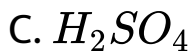
- A. Finely divided iron
- B. molybdenum
- C. Nitrous oxide
- D. Vanadium pentoxide

Answer: D



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49. Lead chamber process is used to manufacture
_____.



Answer: C



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50. What is INCORRECT about H_2SO_4 ?

A. It is a reducing agent.

B. It is a dehydrating agent.

C. It is a sulphonating agent.

D. It is a highly viscous.

Answer: A



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51. H_2SO_4 is highly viscous due to _____.

- A. its affinity for water
- B. hydrogen bonding
- C. its oxidising nature
- D. its reducing nature

Answer: B



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52. The oxoacid of sulphur containing S=S bond is _____ acid.

A. thiosulphurous

B. pyrosulphurous

C. dithionous

D. dithionic

Answer: A



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53. Sea weeds are important source of

A. F

B. I

C. Br

D. Cl

Answer: B



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54. Which of the following statements about the halogen is INCORRECT ?

- A. They are all diatomic and form univalent ions.
- B. They are all diatomic and form divalent ions.
- C. All show variable oxidation state.

D. All possess low melting point and boiling point

Answer: B



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55. Which among the following statements is INCORRECT ?

A. The atomic radius of a halogen atom is the smallest in its period.

B. Halogens liberate minimum heat by gain of electrons as compared to the elements in the corresponding periods.

C. All halogens are coloured

D. Density of halogens increases on moving down the group.

Answer: B



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56. Which of the following properties increases on going down from F to I in group 17 of the periodic table ?

A. Electronegativity

B. Volatile nature

C. Melting point

D. Oxidising power

Answer: C



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57. Choose the CORRECT statement.

- A. Chlorine is insoluble in water.
- B. Iodine is a solid
- C. Iodine is more reactive than bromine.
- D. Bromine is more reactive than chlorine.

Answer: B



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58. Hydrogen fluoride is a liquid unlike other hydrogen halides because

- A. f atom is small in size
- B. HF is a weakest acid
- C. HF molecules are hydrogen bonded
- D. Fluorine is highly reactive

Answer: C



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59. Which of the following pairs is not correctly matched ?

- A. A halogen which is liquid at room temperature -Bromine.
- B. The most electronegative element -fluorine.
- C. The most reactive halogen-Fluorine
- D. The strongest oxidising agent-Iodine.

Answer: D



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60. The catalyst used in Deacon's process is :

A. Pd

B. $AlCl_3$

C. V_2O_5

D. $CuCl_2$

Answer: D



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61. Deacon's process is used in the manufacture of _____.

A. ammonia

B. sulphuric acid

C. nitric acid

D. chlorine

Answer: D



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62. Chlorine gas is not produced by heating:

A. electrolysis of aqueous solution of NaCl

B. action of conc. HCl on MnO_2

C. evaporation of sea water

D. action of conc. H_2SO_4 on NaCl in the presence of MnO_2 .

Answer: C



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63. Chlorine acts as a bleaching agent only in the presence of

A. dry air

B. moisture

C. nitrogen

D. pure oxygen

Answer: B



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64. Bleaching action of Bleaching powder is due to the liberation of

A. O_2

B. $[O]$

C. H_2

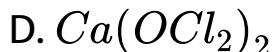
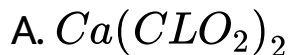
D. $[Cl]$

Answer: B



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65. When chlorine is passed over dry slaked lime at room temperature, the main reaction product is



Answer: C



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66. Fuming hydrochloric acid contains about _____ acid.

A. 100 %

B. 73 %

C. 37 %

D. 90 %

Answer: C



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67. Which of the following is not the characteristic of interhalogen compounds?

A. Covalent nature

B. Volatile but not explosive

C. Form addition products with unsaturated hydrocarbons

D. Behaves as strong reducing agent.

Answer: D



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68. How many lone pair of electrons are present on chlorine in ClF_3 molecule ?

A. 0

B. 1

C. 2

D. 3

Answer: C



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69. Which of the following interhalogens does not exist ?

A. ClF

B. ClF_2

C. BrF_5

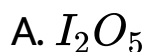
D. ICl_3

Answer: B



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70. Which of the following compounds is used to determine the amount of carbon monoxide ?

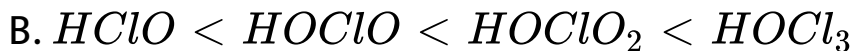
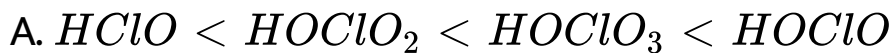


Answer: A

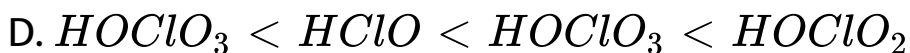
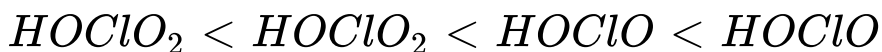


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71. The most stable oxyacid of chlorine is



C.



Answer: B



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72. Which one of the following is the strongest oxidising agent /

A. HOCl

B. $HClO_2$

C. $HClO_3$

D. $HClO_4$

Answer: A



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73. _____ is formed in the air mostly by electron capture of potassium.

A. Helium

B. Neon

C. Argon

D. Krypton

Answer: C



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74. Radon is obtained from the decay of radium

(T/F)

A. Neon

B. Krypton

C. Xenon

D. Radon

Answer: D



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75. Select the INCORRECT statement about inert gases.

A. The ionization enthalpy of each inert gas is the highest in its period.

B. Inert gases have large negative values of electron gain enthalpy.

C. The atomic radii of inert gases are larger than those of halogens.

D. All the inert gases are monatomic in nature.

Answer: B



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76. Which of the following inert gases has the highest ionization energy ?

A. He

B. Ne

C. Ar

D. Kr

Answer: A



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77. Which of the following is most polarised among noble gases ?

A. Kr

B. He

C. Ar

D. Xe

Answer: D



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78. The ease of liquefaction of noble gases decreases in the order

A. $He > Ne > Ar > Kr > Xe$

B. $Xe > Kr > Ar > Ne > He$

C. $Kr > Xe > He > Ar > Xe$

D. $Ar > Kr > Xe > He > Ne$

Answer: B



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79. The inert gas with highest heat of vaporization is

_____.

A. helium

B. neon

C. xenon

D. radon

Answer: D



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80. Noble gases can diffuse through _____.

A. glass

B. rubber

C. plastic

D. all of these

Answer: D



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81. Argon is used

- A. gas cooled nuclear reactors
- B. gas chromatography
- C. detection of gamma particles
- D. photographing the interior of steel casting
and other opaque materials

Answer: B



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82. Liquid _____ is used in laboratories for the detection of mesons and gamma photons.

A. Helium

B. Neon

C. Xenon

D. radon

Answer: C



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83. The radioisotope used in the treatment of cancer is

A. Helium

B. Argon

C. Xenon

D. Radon

Answer: D



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84. Which of the following elements does NOT form stable diatomic molecules ?

A. Iodine

B. Phosphorus

C. Chlorine

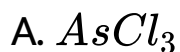
D. Oxygen

Answer: B



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85. Which one of the following does not undergo hydrolysis?



Answer: D



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86. On heating MnO_2 with hydrochloric acid, Scheele prepared oxymuriatic gas. This gas was later renamed as _____.

A. hydrogen

B. oxygen

C. Chlorine

D. ozone

Answer: C



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1. The element that does not exhibit allotropy is

A. P

B. Bi

C. Sb

D. As

Answer: B



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2. Which of the following is INCORRECT about large scale preparation of nitric acid by Ostwald's process ?

A. Oxidation is carried out by using atmospheric oxygen

B. The catalyst used is *Pt / Rh* gangue catalyst.

C. Temperature used is 500 K.

D. N_2O_3 is formed as a by product.

Answer: D



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3. Concentrated HNO_3 reacts with I_2 to give :

A. HI

B. HOI

C. $HOIO_2$

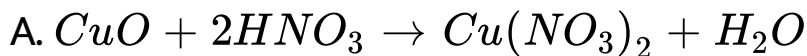
D. $HOIO_3$

Answer: C

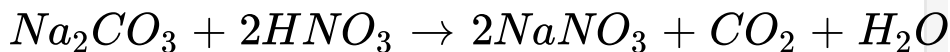


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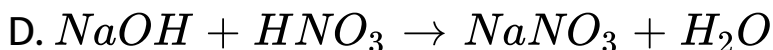
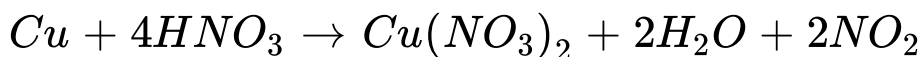
4. In which of the following reactions does nitric acid acts as an oxidising agent ?



B.



C.

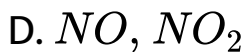
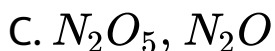
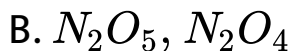
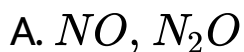


Answer: C



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5. Which pair of oxides of nitrogen is paramagnetic ?



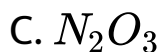
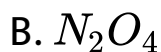
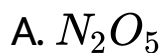
Answer: D



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6. In the catalytic oxidation of ammonia an oxide is formed which is used in the preparation of HNO_3 .

This oxide is



Answer: D



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7. What are the products formed when NH_3 reacts with I_2 ?

A. NH_2NH_2 and NI_3

B. NH_3NI_3 and HI

C. NH_2NH_2 and HI

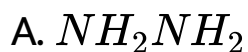
D. NI_3 and NH_3NI_3

Answer: B



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8. Which of the following is one of the products formed when NH_3 reacts with NaOCl ?



Answer: A



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9. One mole of calcium phosphide on reaction with excess of water give:

- A. one mole of phosphine
- B. two moles of phosphoric acid
- C. two moles of phosphine
- D. one mole of phosphorus pentoxide

Answer: C



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10. Phosphine is evolved upon heating _____.

A. phosphoric acid

B. phosphorus acid

C. calcium phosphide in a current of hydrogen

D. Heating acetic acid with P_2O_5

Answer: B



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11. Which of the following pairs of gases is used to prepare Holme's signals ?

A. Phosphine and acetylene

- B. Phosphine and ethylene
- C. Ammonia and acetylene
- D. Phosphine and ammonia

Answer: A



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12. Which statement is FALSE regarding NH_3 and PH_3 ?

- A. PH_3 is weaker base than NH_3
- B. PH_3 is weaker reducing agent than NH_3

C. PH_3 is less soluble in water than NH_3

D. PH_3 burns in oxygen to give P_2O_5 whereas

NH_3 burns in oxygen to give N_2 .

Answer: B



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13. Among the following , the CORRECT statement is

_____.

A. between NH_3 and PH_3 , NH_3 is a better

electron donor because the lone pair of

electrons occupies spherical 's' orbital and it
less directional

B. between NH_3 and PH_3 , NH_3 is a better
electron donor because the lone pair of
electrons occupies sp^3 orbital and is more
directional

C. between NH_3 and PH_3 , NH_3 is a better
electron donor because the lone pair of
electrons occupies sp^3 orbital and is more
directional .

D. between NH_3 and PH_3 , NH_3 is a better electron donor because the lone pair of electrons occupies spherical 's' orbital and is less directional.

Answer: C



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14. Bottle of PCl_3 is kept stoppered because it

A. explodes

B. is volatilized

C. gets oxidised

D. reacts with moisture

Answer: D



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15. When PCl_3 reacts with H_2SO_4 , sulphuryl chloride (SO_2Cl_2) is formed. This shows that H_2SO_4 _____.

A. contains two hydroxyl groups in its molecule

B. contains two hydrogen (H) atoms in its molecule

C. contains one sulphur dioxide (SO_2) molecule

D. is a derivative of SO_3 .

Answer: A



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16. The hybridisation undergone by P in PX_3 and PX_5 are _____ respectively.

A. sp^3 and sp^3d

B. sp^3d and sp^3

C. sp^3 and sp^3d^2

D. sp^3d^2 and sp^3

Answer: A



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17. Which of the following statements is INCORRECT for the structure of PCl_5 ?

A. In gaseous and liquid phase, it has trigonal bipyramidal geometry .

B. Two axial P-Cl bonds are longer than three equivalent P-Cl bonds.

C. three equatorial P-Cl bonds are non-equivalent.

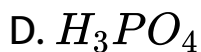
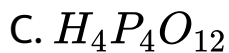
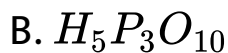
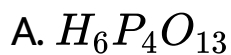
D. In solid state, it exists as $[PCl_4]^+ [PCl_6]^-$

Answer: C



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18. The final product of hydrolysis of P_4O_{10} is _____.



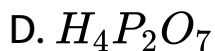
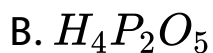
Answer: D



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19. Which of the following oxoacids of phosphorus contains a $P - P$ bond?





Answer: C



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20. The melting point of oxygen is very low compare to that of sulphur because _____.

A. oxygen is composed of diatomic molecule while sulphur is polyatomic

B. the magnitude of van der Waal's forces in oxygen is higher than that of sulphur

C. oxygen is a stronger oxidising agent than sulphur

D. oxygen is more electronegative than sulphur.

Answer: A



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21. Polonium possess lower melting and boiling points than tellurium due to _____.

A. higher atomic size

B. inert pair effect

C. stronger van der Waals forces in polonium

D. higher electronegativity

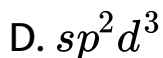
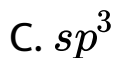
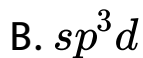
Answer: B



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22. In the compound TeF_4 , the hybridisation of Te is _____.

A. sp^2d^2

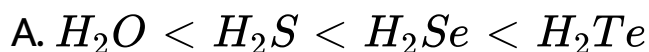


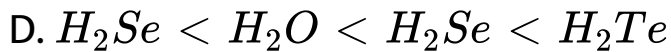
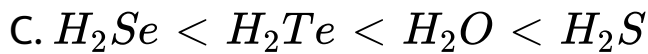
Answer: B



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23. The CORRECT increasing order of dipole moments of the following is _____.





Answer: B



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24. The number of unpaired electrons in the p-subshell of oxygen atom

A. 1

B. 2

C. 3

D. 4

Answer: B



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25. it is possible to obtain oxygen from air by fractional distillation because

A. oxygen is in a different group of the periodic table from nitrogen

B. oxygen is more reactive than nitrogen

C. liquid dioxygen has higher boiling point than liquid dinitrogen

D. oxygen has a higher density than nitrogen

Answer: C



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26. Which statement is INCORRECT among the following ?

A. The oxide which combines with water to give an acid is referred as acidic oxide.

B. The oxide which show both acidic and basic characteristics are called amphoteric oxides.

C. In a period, the acidic character of oxide increases while the basic character decreases.

D. NO , N_2O and CO are examples of amphoteric oxides.

Answer: D



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27. Rhombic sulphur consists of

A. S_8

B. S_2

C. S_3

D. S_4

Answer: A



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28. When SO_2 is passed through acidified $K_2Cr_2O_7$ solution

A. $+3 \rightarrow +6$

B. $+6 \rightarrow +3$

C. $+4 \rightarrow +3$

D. $+6 \rightarrow -3$

Answer: B



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29. When conc. H_2SO_4 comes in contact with sugar it becomes black due to

A. hydrolysis

B. hydration

C. decolourisation

D. dehydration

Answer: D



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30. Which of the following is NOT formed when HBr reacts with H_2SO_4 ?

A. Br_2

B. H_2O

C. SO_2

D. H_2S

Answer: D



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31. Which of the following gas is evolved when crystals of $K_4[Fe(CN)_6]$ is heated with conc. H_2SO_4 ?

A. CO_2

B. NO_2

C. CO

D. SO_2

Answer: C



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32. The oxidation state of S in dithionic acid is/are _____.

A. -2 and $+4$

B. $+4$

C. -2 and $+6$

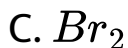
D. $+5$

Answer: D



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33. In which of the following the repulsion between the nonbonding pairs of electrons of two atoms is large ?



Answer: A



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34. In OF_2 , the number of bond pairs and lone pairs of electrons are respectively,

A. 2,6

B. 2,8

C. 2,10

D. 2,9

Answer: B



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35. Which of the following is NOT a mineral of chlorine ?

A. Carnalite

B. Sylvine

C. Cryolite

D. Horn silver

Answer: C



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36. Chlorine can remove hydrogen from hydrocarbons. This is due to its _____.

- A. bleaching action
- B. reducing property
- C. very high affinity for hydrogen
- D. gaseous state

Answer: C



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37. Treatment of CS_2 with excess of Cl_2 gives

A. CCl_4

B. SCl_2

C. S

D. both (A) and (C)

Answer: D



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38. In interhalogen compounds of XX'_n type (where $n=1,3,5,7$), _____.

A. X is the halogen of smaller size and more electropositive than X'.

B. X is the halogen of larger size and more electropositive than X'.

C. X is the halogen of smaller size and less electropositive than X'.

D. X is the halogen of larger size and less electropositive than X'.

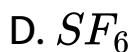
Answer: B



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39. The formula of some fluorides are given below.

Which of them will combine further with fluorine?

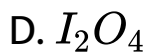
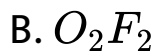
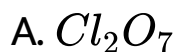


Answer: A



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40. Which of the following is used to isolate plutonium from used nuclear fuel ?

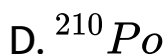
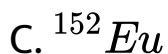
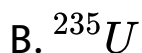
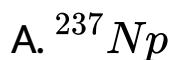


Answer: B



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41. ClF_3 and BrF_3 are used in the enrichment of _____.



Answer: B



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42. Which one of the following halogens forms only one oxo acid ?

A. Fluorine

B. Chlorine

C. Bromine

D. Iodine

Answer: A



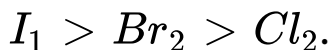
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43. Among the following statements, which is INCORRECT ?

A. Cl_2 gas is dried by using conc. H_2SO_4 .

B. HF shows hydrogen bonding.

C. Oxidising power of halogens follow the order



D. HI is the strongest acid among HI, HBr, HCl.

Answer: C



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44. Longest lived isotope of radon , have life of _____.

A. 3.8 hours

B. 3.8 days

C. 3.8 months

D. 3.8 years

Answer: B



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45. For noble gases, the ratio of specific heat at constant pressure (C_P) to specific heat at constant volume (C_V) is _____.

A. 1.11

B. 1.33

C. 1.66

D. 1.88

Answer: C



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46. Gradual addition of electronic shells in the noble gases causes a decrease in their

A. ionization energy

B. Atomic radius

C. boiling point

D. density

Answer: A



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47. The interatomic forces of attraction present in noble gas are _____.

- A. dipole-dipole interaction
- B. ion-dipole interaction
- C. induced dipole-induced dipole interaction
- D. ion-induced dipole interaction

Answer: C



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48. Noble gases are group of elements which exhibit very :

- A. high vaporization enthalpy
- B. low chemical activity
- C. minimum electronegativity
- D. much paramagnetic properties

Answer: B



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49. The solubility of noble gases in water is due to _____.

- A. their inert nature
- B. dipole-induced dipole interaction
- C. low heat of vaporization
- D. the property of diffusibility

Answer: B



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50. Which of the following is NOT the reason for non-reactivity of noble gases ?

A. Completely filled valence shell.

B. Large and positive values of electron gain enthalpy.

C. Low enthalpy of vaporization.

D. High ionization enthalpy

Answer: C



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51. Which of the following noble gas was reacted with PtF_6 by Bartlett to prepare the first noble gas compound ?

A. He

B. Xe

C. Ar

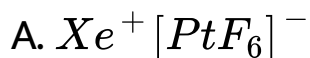
D. Kr

Answer: B



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52. The first compound of noble gases prepared in laboratory was



Answer: A



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53. Which of the following does not react with fluorine ?

A. He

B. Kr

C. Ar

D. Ne

Answer: B



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1. The element that does not exhibit allotropy is

A. phosphorus

B. arsenic

C. antimony

D. bismuth

Answer: D



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2. Which among the following group 15 element forms most stable pentavalent compound ?

A. Phosphorus

B. Antimony

C. Bismuth

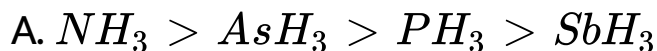
D. Arsenic

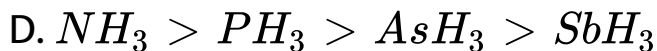
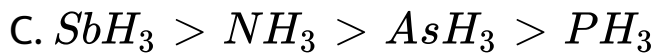
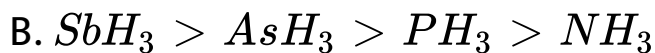
Answer: A



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3. Boiling/melting points of the following hydrides follow in order.





Answer: C

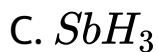


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4. The least stable hydride of 15th group elements is

_____.





Answer: D



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5. Which element among the following does form $p\pi - p\pi$ multiple bonds ?

A. Arsenic

B. Nitrogen

C. Phosphorus

D. Antimony

Answer: B



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6. In case of nitrogen, NCl_3 is possible but not NCl_5 while in case of phosphorous, PCl_5 are possible. It is due to

A. availability of vacant d-orbital in P but not in N

B. lower electronegativity of P than N

C. lower tendency of H bond formation in P than

N

D. occurrence of P I solid while N in gaseous state

at room temperature.

Answer: A



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7. Ammonium dichromate on heating gives

A. chromium oxide and ammonia

B. chromic acid and nitrogen

C. chromium oxide and nitrogen

D. chromic acid and ammonia

Answer: C



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8. Extra pure N_2 can be obtained by heating

A. NH_3 with CuO

B. NH_4NO_3

C. $(NH_4)_2Cr_2O_7$

D. $Ba(N_3)_2$

Answer: D



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9. Which among the group-15 elements does not exist as tetra atomic molecule ?

A. Nitrogen

B. Phosphorus

C. Arsenic

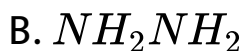
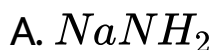
D. Antimony

Answer: A



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10. Excess of ammonia with sodium hypochloride solution in the presence of glue or gelatine gives

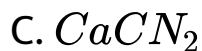
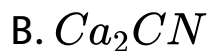
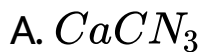


Answer: B



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11. The product obtained as a result of a reaction of nitrogen with CaC_2 is



Answer: C



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12. Ammonia on reaction with chlorine forms an explosive NCl_3 . What is the mole ratio of NH_3 and Cl_2 required for this reaction ?

A. 8 : 3

B. 1 : 1

C. 1 : 3

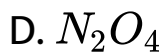
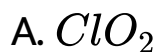
D. 10 : 1

Answer: C



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13. The mixture of concentrated HCl and HNO_3 made in 3: 1 ratio contains

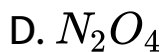


Answer: B



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14. The reaction of zinc with dilute and concentrated nitric acid, respectively, produce

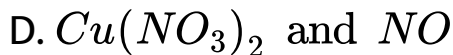
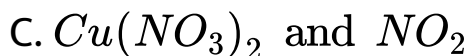
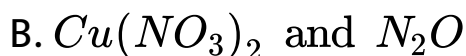
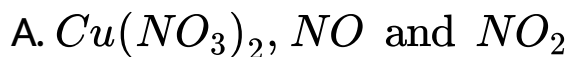


Answer: A



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15. When copper is heated with conc. HNO_3 it produces?



Answer: C



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16. Brown ring test is used for detection of which radical?

A. Ferrous

B. Nitrite

C. Nitrate

D. Ferric

Answer: C



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17. Which oxide of nitrogen is obtained on heating ammonium nitrate at $250^{\circ}C$?

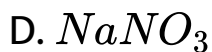
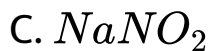
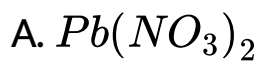
- A. Nitric oxide
- B. Nitrous oxide
- C. Nitrogen dioxide
- D. Dinitrogen oxide

Answer: B



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18. Nitrogen dioxide is released by heating

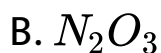
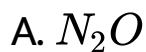


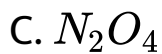
Answer: A



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19. Which oxide is colourless and neutral ?





Answer: A



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20. In which substance does nitrogen exhibit the lowest oxidation state ?

A. Nitrogen gas

B. Ammonia

C. Nitrous oxide

D. Nitric oxide

Answer: B



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21. In which among the oxides of nitrogen is the oxidation number of nitrogen lowest ?

A. Nitric oxide

B. Nitrous oxide

C. Nitrogen dioxide

D. Nitrogen trioxide

Answer: B



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22. Oxidation state of nitrogen in N_2O_4 is _____

A. -4

B. $+4$

C. $+5$

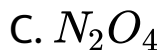
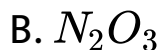
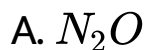
D. $+6$

Answer: B



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23. The nitrogen oxide (s) that contains $N - N$ bonds is/are



D. all

Answer: D



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24. Atoms in P_4 molecule of white phosphorus are arranged regularly in the following way :

- A. At the corners of tetrahedron
- B. At the corners of a cube .
- C. At the corners of a four membered ring.
- D. At the centre and corners of an equilateral triangle.

Answer: A



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25. Which of the following statement is INCORRECT ?

- A. The stability of hydrides increase from NH_3 to BiH_3 in group 15 of the periodic table.
- B. Nitrogen cannot form $d\pi - p\pi$ bond.
- C. Single N-N bond is weaker than the single P-P bond.
- D. N_2O_4 has four resonance structures.

Answer: A



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26. Phosphine is prepared by the action of

A. P and H_2SO_4

B. P and NaOH

C. P and H_2S

D. P and HNO_3

Answer: B



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27. The reaction of $P_4 + NaOH + H_2O$ involves the following for P:

A. Oxidation

B. Reduction

C. Both oxidation and reduction

D. Neutralization

Answer: C



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28. Sulphuryl chloride (SO_2Cl_2) reacts with white phosphorus (P_4) to give _____.

A. PCl_5 , SO_2

B. $OPCl_3$, $SOCl_2$

C. PCl_5 , SO_2 , S_2Cl_2

D. $OPCl_3$, SO_2 , S_2Cl_2

Answer: A



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29. Phosphine is not obtained by the reaction

A. White P is heated with NaOH

B. Red P is heated with NaOH

C. Ca_3P_2 reacts with water

D. Phosphorus trioxide is boiled with water

Answer: B



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30. What may be expected to happen when phosphine gas is mixed with chlorine gas ?

A. The mixture only cools down.

B. PCl_3 and HCl are formed and the mixture cools down.

C. PH_3Cl_2 is formed with warming up.

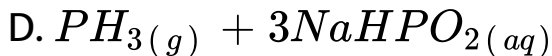
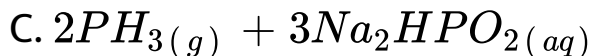
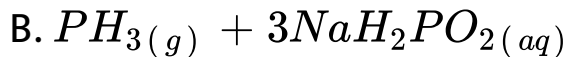
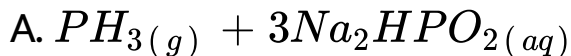
D.

Answer: B



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31. Which product will be obtained in the following reaction ? $P_4 + NaOH + H_2O \rightarrow$



Answer: B



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32. The molecular formulae for phosgene and tear gas are _____ and _____ respectively.



Answer: C

33. Which is true with regard to the properties of PH_3 ?

- A. PH_3 is not much stable
- B. PH_3 is neutral towards litmus.
- C. PH_3 has fishy smell.
- D. PH_3 is insoluble in water.

Answer: C

34. Which of the element of nitrogen family produce maximum number of oxy-acids ?

A. N

B. P

C. As

D. Sb

Answer: B



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35. The number of hydrogen atom(s) attached to phosphorus atom in hypophosphorus acid is

A. zero

B. two

C. one

D. three

Answer: B



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36. In which oxyacids of phosphorus three-OH groups are present ?

- A. Pyrophosphorus acid
- B. Orthophosphorus acid
- C. Orthophosphoric acid
- D. Hypophosphorus acid

Answer: C



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37. What is the basicity of orthophosphorous acid ?

A. one

B. two

C. three

D. four

Answer: B



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38. Which among the following oxoacids of phosphorus shows a tendency of disproportionation ?

- A. Phosphinic acid (H_3PO_2)
- B. Orthophosphoric acid (H_3PO_4)
- C. Phosphonic acid (H_3PO_3)
- D. Pyrophosphoric acid ($H_4P_2O_7$)

Answer: C



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39. Identify the compound in which phosphorus exists in the oxidation state of +1.

- A. Phosphonic acid (H_3PO_3)

B. Phosphinic acid (H_3PO_2)

C. Pyrophosphoric acid ($H_4P_2O_7$)

D. Orthophosphoric acid (H_3PO_4)

Answer: B



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40. Strong reducing behaviour of H_3PO_2 is due to

A. high oxidation state of phosphorus

B. presence of two -OH groups and one P-H bond.

C. presence of one -OH group and two P-H bonds.

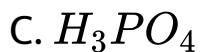
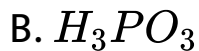
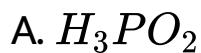
D. high electron gain enthalpy of phosphorus

Answer: C



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41. In P_4O_{10} ,



Answer: C



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42. Which is the correct statement for the given acids ?

- A. Phosphinic acid is a monoprotic acid while phosphonic acid is a diprotic acid.
- B. Phosphinic acid is a diprotic while phosphoric acid is a monoprotic acid
- C. Both are diprotic acid
- D. Both are triprotic acids.

Answer: A



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43. The pair in which phosphorus atoms have a formed oxidation state of $+3$ is

- A. Orthophosphorus and pyrophosphorus
- B. Pyrophosphorus and hypophosphoric acids
- C. Orthophosphorus and hypophosphoric acids
- D. Pyrophosphorus and pyrophosphoric acids

Answer: A



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44. How many bridging oxygen atoms are presents in P_4O_{10} ?

A. 6

B. 4

C. 2

D. 5

Answer: A



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45. P_4O_{10} is not used to dry NH_3 gas because

A. P_4O_{10} is basic and NH_3 is acidic.

B. P_4O_{10} is acidic and NH_3 is basic

C. P_4O_{10} is not a drying agent

D. P_4O_{10} reacts with moisture in NH_3

Answer: B



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46. Which among the following group 16 elements exists in more than two allotropic states ?

A. Polonium

B. Tellurium

C. Selenium

D. Oxygen

Answer: C



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47. Which is the most stable allotrope of sulphur ?

A. Octahedral sulphur

B. Monoclinic sulphur

C. Plastic sulphur

D. Colloidal sulphur

Answer: A



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48. Amongst H_2O , H_2S , H_2Se and H_2Te the one with highest boiling point is :

A. H_2O because of hydrogen bonding

B. H_2Te because of higher molecular weight

C. H_2S because of hydrogen bonding

D. H_2Se because of lower molecular weight

Answer: A



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49. Which among the following compounds does not act as reducing agent ?

A. H_2O

B. H_2S

C. H_2Se

D. H_2Te

Answer: A



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50. The element that does not form acidic oxide is

A. Carbon

B. Phosphorus

C. Chlorine

D. Barium

Answer: D



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51. Among the following, the most basic oxide is-

A. ZnO

B. MgO

C. Al_2O_3

D. N_2O_5

Answer: B



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52. Which of the following is different from other three oxides?

A. MgO

B. SnO

C. ZnO

D. PbO

Answer: A



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53. Which of the following is a neutral oxide?

A. SO_2

B. BaO

C. N_2O

D. CO_2

Answer: C



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54. Identify the element that forms amphoteric oxide.

A. Carbon

B. Zinc

C. Calcium

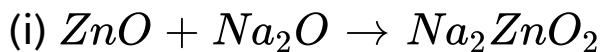
D. Sulphur

Answer: B



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55. In the following reaction, ZnO is respectively acting as a/an



A. base and acid

B. base and base

C. acid and acid

D. acid and base

Answer: D



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56. The colour of liquid O_2 is _____.

A. pale yellow

B. pale blue

C. green

D. red

Answer: B



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57. The bond angle and O-O bond length in O_3 are respectively _____.

A. 116.8° and 1.28\AA

B. 90° and 1.38\AA

C. 120° and 1.1\AA

D. 60° and 1.5\AA

Answer: A



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58. Ozone is present as a chief constituent in which region of the atmosphere ?

- A. Troposphere
- B. Stratosphere
- C. Mesosphere
- D. Thermosphere

Answer: B





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59. Six volumes of oxygen, on complete ozonisation form ____ volumes of ozone.

A. 4

B. 3

C. 2

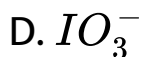
D. 6

Answer: A



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60. Ozone, on reaction with KI solution, finally produces _____.



Answer: B



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61. Number of unpaired electrons on sulphur in sulphur dioxide gas is ?

A. 2

B. 6

C. 8

D. 1

Answer: A



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62. Which one statement about sulphur dioxide gas is INCORRECT ?

A. It has an angular shape

B. It decolorises acidified potassium permanganate solution.

C. Two S-O bonds are equal.

D. It is a dehydrating agent.

Answer: D



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63. Aqueous solutions of hydrogen sulphide and sulphur dioxide when mixed together, yield _____.

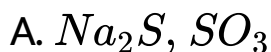
- A. sulphur and water
- B. sulphur trioxide and sulphur
- C. hydrogen peroxide and sulphur
- D. hydrogen and sulphurous acid

Answer: A



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64. A crystalline solid 'X' reacts with dil. HCl to liberate a gas 'Y'. 'Y' decolourises acidified $KMnO_4$. When a gas 'Z' is slowly passed into an aqueous solution of 'Y', colloidal sulphur is obtained. 'X' and 'Z' could be, respectively.



Answer: C



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65. The oxidation number of sulphur in S_8 , S_2F_2 and H_2S respectively are:

- A. 0, + 1 and - 2
- B. + 2, + 1 and - 2
- C. 0, + 1 and + 2
- D. - 2, + 1 and - 2

Answer: A



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66. Which is produced by contact process ?

A. H_2SO_4

B. steel

C. S

D. NaOH

Answer: A



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67. What is the catalyst used for oxidation of SO_2 to SO_3 in lead chamber process for manufacture of

sulphuric acid ?

- A. Nitric acid
- B. Nitrous acid
- C. Potassium iodine
- D. Dilute HCl

Answer: A



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68. Sulphuric acid reacts with PCl_5 to give

- A. thionyl chloride

B. sulphur monochloride

C. sulphuryl chloride

D. sulphur tetrachloride

Answer: C



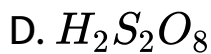
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69. Which one is known as oil of vitriol ?

A. H_2SO_3

B. H_2SO_4

C. $H_2S_2O_7$

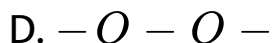
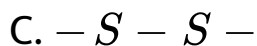
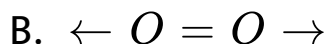
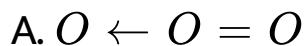


Answer: B



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70. Peroxydisulphuric acid has which of the following bond ?

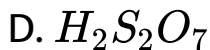
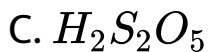
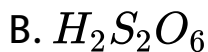
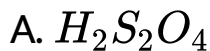


Answer: D



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71. The molecular formula of dithionic acid is _____.



Answer: B



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72. Which oxyacid of sulphur contains S-S single bond?

A. Oleum

B. Marshall's acid

C. Dithionic acid

D. Thiosulphuric acid

Answer: C



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73. Which oxoacid of sulphur contains S-S bond in its structure ?

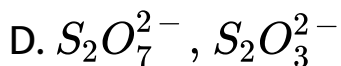
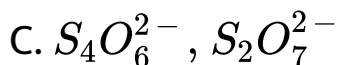
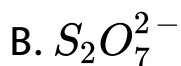
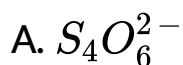
- A. Disulphurous acid
- B. Disulphuric acid
- C. Perdisulphuric acid
- D. Hydrosulphurous acid

Answer: D



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74. In which pair of ions both the species contains $S - S$ bond?



Answer: A



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75. Which of the following halogen does not exhibit positive oxidation state in its compounds?

A. Cl

B. Br

C. I

D. F

Answer: D



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76. What is the highest oxidation state exhibited by group 17 elements ?

A. +1

B. +3

C. +5

D. +7

Answer: D



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77. Which halogen has the highest value of negative electron gain enthalpy ?

A. Fluorine

B. Chlorine

C. Bromine

D. Iodine

Answer: B



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78. The weakest acid HX ($X = F, Cl, Br, I$) is _____.

A. HF

B. HCl

C. HBr

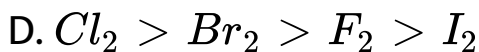
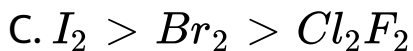
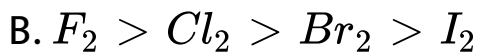
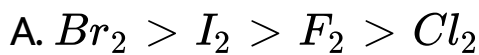
D. HI

Answer: A



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79. Which one of the following orders is correct for the bond dissociation enthalpy of halogen molecules?



Answer: D



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80. The variation of the boiling points of the hydrogen halides is in the order $HF > HI > HBr > HCl$.

What explains the higher boiling point of hydrogen fluoride?

- A. The bond energy of HF molecules is greater than in other hydrogen halides.
- B. The effect of nuclear shielding is much reduced in fluorine which polarizes the HF molecule.
- C. The electronegativity of fluorine is much higher than for other elements in the groups.
- D. There is strong hydrogen bonding between HF molecules.

Answer: D



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81. Which halide of magnesium has highest ionic character?

A. Chlorine

B. Bromide

C. Iodine

D. Fluoride

Answer: D



82. Which one of the following orders is not in accordance with the property stated against it ?

A. $F_2 > Cl_2 > Br_2 > I_2$: electronegativity

B. $F_2 > Cl_2 > Br_2 > I_2$: Bond dissociation energy

C. $F_2 > Cl_2 > Br_2 > I_2$: Oxidising power

D. $HI > HBr > HCl > HF$: Acidic property in water

Answer: B



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83. Which of the following is used in the preparation of chlorine?

A. Only MnO_2

B. only $KMnO_4$

C. both MnO_2 and $KMnO_4$

D. Either MnO_2 and $KMnO_4$

Answer: C



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84. Which of the following mixture is called aquaregia ?

A. Two parts of conc.HCl and two parts of conc.



B. Three parts of dil. HCl and one part of conc.



C. Three parts of conc. HCl and one part of dil.



D. Three parts of conc. HCl and one part of conc.



Answer: D



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85. The mixture of conc. HCl and potassium chlorate on heating gives _____.

A. Cl_2 only

B. ClO_2 only

C. $Cl_2 + ClO_2$

D. $Cl_2 + ClO_2 + ClO_3$

Answer: C

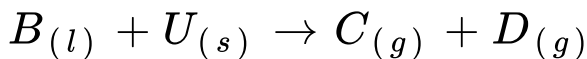
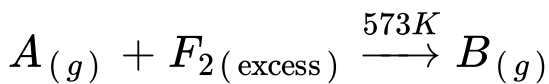
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86. The products obtained when chlorine gas reacts with cold and dilute aqueous $NaOH$ are :

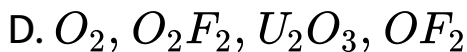
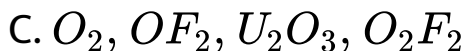
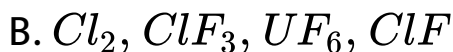
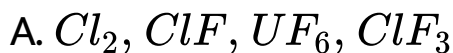


Answer: C

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The gases A, B, C and D are respectively _____.



Answer: B



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88. The stability of interhalogen compounds follows the order



Answer: A



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89. Which among the following is the most reactive
gt

A. Cl_2

B. Br_2

C. I_2

D. ICl

Answer: D



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90. What is the geometry of molecule of bromine penta fluoride ?

- A. Square planar
- B. Trigonal bipyramidal
- C. Square pyramidal
- D. Octahedral

Answer: C



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91. Which halogen forms an oxoacids that contains the halogen atom in tripositive oxidation state ?

A. Fluorine

B. Chlorine

C. Bromine

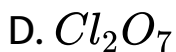
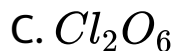
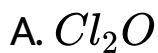
D. Iodine

Answer: B



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92. Which one is the anhydride of $HClO_4$?

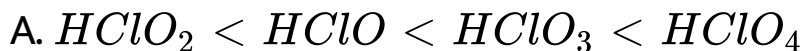


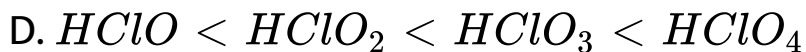
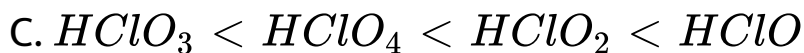
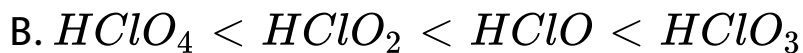
Answer: D



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93. Among the following, the correct order of acidity is:





Answer: D



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94. Which element among the following does not form diatomic molecules?

A. Argon

B. Oxygen

C. Nitrogen

D. Bromine

Answer: A



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95. The most abundant noble gas in the atmosphere is

A. Neon

B. Argon

C. Xenon

D. Krypton

Answer: B



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96. Electronic configuration of only one P block element is exceptional one molecule of that element consists of how many atoms of it ?

A. One

B. Two

C. Three

D. Four

Answer: A



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97. Which one has the highest boiling point?

A. He

B. Ne

C. Kr

D. Xe

Answer: D



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98. The formation of $O_2^+ [PtF_6]^-$ is the basis for the formation of xenon fluorides. This is because:

- A. O_2 and Xe are diamagnetic.
- B. Both O_2 and Xe are gases.
- C. O_2 and Xe have comparable ionisation.
- D. O_2 and Xe have comparable electronegativities.

Answer: C



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99. The noble gas which forms maximum number of compound is

- A. Ar
- B. He
- C. Xe
- D. Ne

Answer: C



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100. The correct geometry and hybridisation for XeF_4 are

- A. square planar, sp^3d^2
- B. octahedral, sp^3d^2
- C. trigonal bipyramidal, sp^3d
- D. planar triangle, sp^3d^3

Answer: A



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101. Which one of the following statements regarding helium is incorrect ?

A. It is used to produce and sustain powerful superconducting magnets.

B. It is used as a cryogenic agent for carrying out experiments at low temperatures.

C. It is used to fill gas balloons instead of hydrogen because it is lighter than hydrogen and non-inflammable.

D. It is used in gas -cooled nuclear reactors.

Answer: C



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102. Argon is used in arc welding because

- A. low reactivity with metal
- B. ability to lower the melting point of metal.
- C. flammability
- D. high calorific value.

Answer: A



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103. In which of the following arrangements, the sequence is not strictly according to the property written against it ?

A. $HF < HCl < HBr < HI$: increasing acidic strength

B. $NH_3 < PH_3 < AsH_3 < SbH_3$: increasing ionization strength

C. $B < C < O < N$: increasing first oxidising power.

D. $CO_2 < SiO_2 < SnO_2 < PbO_2$: increasing oxidising power.

Answer: B

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104. The incorrect statement among the following is :

- A. C_{60} is an allotrope form of carbon
- B. O_3 is an allotrope form of oxygen
- C. S_8 is only allotropic form of sulphur

D. red phosphorus is more stable in air than white phosphorus

Answer: C



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105. Identify a metalloid from the following list of elements

A. Carbon

B. Neon

C. Sodium

D. Tellurium

Answer: D



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106. What is the most abundant element on earth ?

A. Hydrogen

B. Nitrogen

C. Oxygen

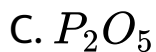
D. Silicon

Answer: C



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107. What is smoke screen ?



Answer: C



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108. Among the following ,which one is the wrong statement

- A. I_3 has bent geometry
- B. PH_5 and $BiCl_5$ do not exist.
- C. $p\pi - d\pi$ bonds are present in SO_2
- D. SeF_4 and CH_4 have same shape.

Answer: D



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1. Fluoric acid is _____.

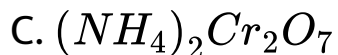
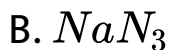
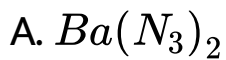


Answer: C



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2. Which of the following liberate nitrogen on heating?



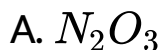
D. All of these

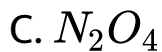
Answer: D



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3. Which of the following is also called as nitrogen sesquioxide?



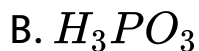
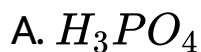


Answer: A



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4. Which acid is formed when P_2O_3 dissolve in water ?





Answer: B



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5. _____ is used in estimation of iodine number of fats and oils .



D. IF_7

Answer: B



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6. The π bonds in SO_2 molecule arises due to _____ overlap.

A. σ

B. $p\pi - p\pi$ and σ

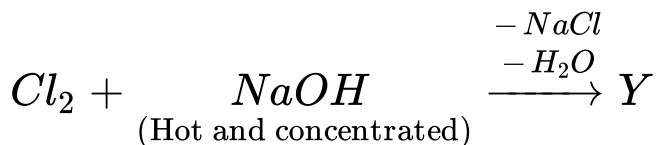
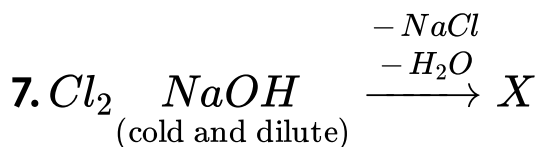
C. $p\pi - d\pi$ and $p\pi - p\pi$

D. only $p\pi - d\pi$

Answer: C



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In these reactions, X and Y are _____ respectively.

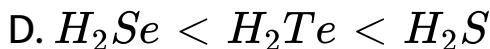
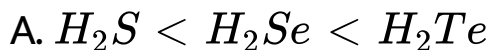
- A. NaOCl and NaClO_3
- B. NaCl_3 and NaOCl
- C. HOCl and HOClO_3
- D. HOCl_3 and HOCl

Answer: A



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8. The increasing order of acidity of the following is _____.



Answer: A



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9. Which of the following is the most suitable drying agent for ammonia gas ?

A. Anhydrous calcium chloride

B. Conc. Sulphuric acid

C. Calcium oxide

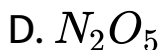
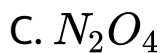
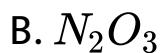
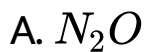
D. Phosphorus pentaoxide

Answer: C



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10. Which blue liquid is obtained on reacting equimolar amounts of two gases at -30°C ?



Answer: B



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11. Which one is CORRECT statement ?

A. Basicity of H_3PO_4 and H_3PO_3 is 3 and 3 respectively.

B. Basicity of H_3PO_4 and H_3PO_3 is 2 and 1 respectively.

C. Basicity of H_3PO_4 and H_3PO_3 is 2 and 2 respectively.

D. Basicity of H_3PO_4 and H_3PO_3 is 3 and 2 respectively.

Answer: D



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12. Metal halide which is insoluble in water is

A. AgI

B. KBr

C. $CaCl_2$

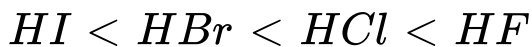
D. AgF

Answer: A



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13. Which of the following properties does correspond to the order?



- A. Only thermal stability
- B. Only reducing character
- C. Only bond dissociation enthalpy
- D. Both bond dissociation enthalpy and thermal stability

Answer: B



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14. White phosphorus on reaction with $NaOH$ gives PH_3 as one of the products. This is a

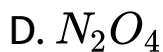
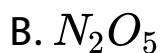
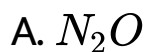
- A. dimerization
- B. disproportionation
- C. condensation
- D. precipitation

Answer: B



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15. Which of the following oxides of nitrogen is paramagnetic ?



Answer: C



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16. In group 15 elements , due to inert pair effect , the stability of _____ on moving down the group .

A. +3 oxidation state decreases and +5 oxidation state increases

B. +5 oxidation state decreases and +3 oxidation state increases.

C. +3 and +5 oxidation states decrease

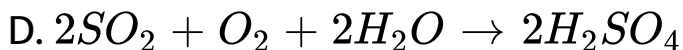
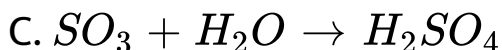
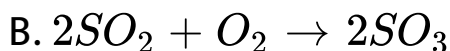
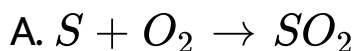
D. +3 and +5 oxidation states increase

Answer: B



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17. In which of the following reaction V_2O_5 is used at catalyst ?



Answer: B



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18. Which of the following is the least volatile ?

A. HF

B. HCl

C. HI

D. HBr

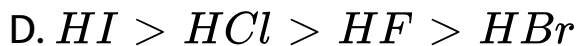
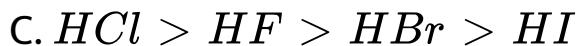
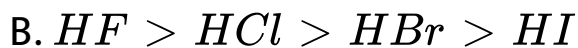
Answer: A



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19. The correct order of the thermal stability of hydrogen halides ($H - X$) is





Answer: B



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20. The order of solubility of noble gases in water is



D. $Ar > Ne > He > Kr > Xe$

Answer: C



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